

Remarks

Claims 1, 2, 4-11 and 13-18 are now pending in this application. Claims 1-18 were rejected by the Examiner in an Office Action dated March 16, 2004. Applicants have amended Claims 1, 7, 8, 11, 13-15, 17 and 18, and cancelled Claims 3 and 12, herewith. Reconsideration of the pending claims is respectfully requested, based upon the following remarks.

Claim Rejections – 35 U.S.C. § 102

The Examiner rejected Claims 1-7 under 35 U.S.C. § 102(b) as being anticipated by Ellis (U.S. Patent No. 5,237,468). Applicants traverse as follows.

With respect to Claim 1, such claim has been amended to include substantial features of originally filed Claim 3 (which is being cancelled herewith). As amended, Claim 1 recites "wherein the camera includes an oscillator located on the hand *whose output is selectively provided to enable the camera during an audit operation*" (emphasis added by Applicants). This claimed feature of an oscillator whose output is selectively provided to enable the camera during an audit operation advantageously provides improved emission suppression by allowing the camera to be selectively enabled during an audit operation. In rejecting Claim 3 (substantial features of which are now included in amended Claim 1), the Examiner states that Ellis teaches an oscillator located on the hand whose output is selectively provided to the camera during an audit operation at Ellis' abstract and col. 10, lines 17-31 (with the Examiner noting that the claimed oscillator being considered Ellis' "anthropomorphic robot arm"). Applicants show two-fold error as follows.

First, even assuming Ellis' anthropomorphic robot arm reads on the claimed oscillator, it does not perform the claimed functionality recited in Claim 1. Specifically, Ellis' anthropomorphic robot arm does not have an output that is selectively provided to the camera during an audit operation. Ellis states in his abstract:

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"Reliability of an automated storage library is improved by mounting at least one CCD cameras on a turret plate with two grippers, wherein the CCD camera provides video support for both grippers. *The turret plate is rotatably mounted on the end of an anthropomorphic robot arm such that the camera and each gripper is rotated and angled into position as needed for viewing or gripping, respectively.* The CCD camera is positioned to view a tape cartridge for capturing an image of the label attached thereto. While the captured image is being processed to verify the VOLSER, the first gripper is rotated into position and moved forward to grip the desired tape cartridge. *The robot arm then moves the camera and gripper assembly to a tape drive and rotates the second gripper into position to remove another tape cartridge from the tape drive. The turret plate is again rotated to position the first gripper for inserting the verified tape cartridge into the tape drive.* Thus pick-before-place operations may be performed with a single camera and two grippers. A second camera can be added to increase reliability for pick-before-place. Additionally, if either gripper fails, a single camera and a single gripper in any combination will allow the automated storage library to continue to provide storage and retrieval functions." (emphasis added by Applicants)

As can be seen, the only discussion of the anthropomorphic robot arm in Ellis' abstract states that the camera and gripper can be rotated and angled. There is no mention of any type of the arm having an output that is *selectively provided* to enable the camera during an audit operation, as claimed. Nor does the cited passage at Ellis Col. 10, lines 17-31 overcome this deficiency. There, Ellis states:

"Once the magazine holder location and orientation is established, the robot 36 will interpolate to locate each of the ten tape cartridges stored therein. This calibration process is repeated for each magazine holder in the automated cartridge library 31. Additionally, the controller 37 needs to know where each tape cartridge is stored. Initially, the automated tape cartridge library 31 may have all tape cartridges manually inserted into the storage cells 33. The robot 36 is then instructed to take an inventory. The robot 36 moves to each magazine holder where the CCD camera 64 or 66 captures an image of, for example, five tape cartridges. A video processor (not shown) can then process the captured image to read tape cartridge identifying characters on a label attached to each tape cartridge."

As can be seen, this passage discusses a calibration process for magazine holders, and the taking of an inventory of tape cartridges in a magazine. There is no teaching of any type of the arm having an output that is *selectively provided* to enable the camera during an audit operation, as claimed.

Secondly, it is an unreasonable interpretation that Ellis' anthropomorphic arm reads on the claimed oscillator. Specifically, Claim 1 recites that the camera includes an *oscillator located on the hand*. Ellis' anthropomorphic arm is not located on the hand. At best, Ellis' hand is located on the end of the arm. Thus, Ellis' anthropomorphic arm cannot reasonably be construed to read on the claimed oscillator as it is not located on the hand, as claimed.

Applicants have thus shown two-fold error in the Examiner's rejection of originally filed Claim 3. As Claim 1 has been amended to include substantial features of originally filed Claim 3, Applicants show that Claim 1 is not anticipated by the cited reference for similar reasons to those given above regarding originally filed Claim 3.

With respect to dependent Claims 2 and 4-6, Applicants initially traverse for reasons given above regarding Claim 1 (of which Claims 2 and 4-6 depend upon).

Further with respect to Claim 5, Applicants show that the cited reference does not teach the claimed feature of "wherein manipulator positioning is only controlled by the camera during an audit operation". Thus, it can be seen that this claim recites camera control of manipulator positioning, and such positioning is only controlled by the camera during an audit operation. In rejecting Claim 5, the Examiner states that this is taught by Ellis at col. 6, lines 10-16, abstract and col. 10, lines 17-31. At col. 6, lines 10-16, Ellis states:

"Camera assemblies 61 and 62 and grippers 69 and 70, being independently mounted, may be removed and attached quickly and easily. Although two camera assemblies 61 and 62 are shown, the gripper/vision assembly 41 may perform pick-before-place operations with a single camera as described in the method of operation section."

As can be seen, this passage merely discusses in general terms the existence of camera assemblies and grippers. There is no discussion that manipulator positioning is only controlled by the camera during an audit. The other cited passages have been previously been reproduced above, and these passages similarly fail to teach or otherwise disclose that manipulator positioning is only controlled by the camera during an audit. For a prior art reference to anticipate in terms of 35 U.S.C. 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990) (emphasis added by Applicants). As every element is not identically shown in the cited Ellis reference – specifically the claimed feature of "wherein manipulator positioning is only controlled by the camera during an audit operation" – it is shown that Claim 5 has been erroneously rejected under 35 U.S.C. § 102(b).

With respect to Claim 7, Applicants have merely amended Claim 7 to be in independent form, to include all features of originally filed Claim 1 (or which Claim 7 originally depended upon). Hence, Claim 7 is merely being amended as to form, and is not being amended for purposes of patentability. As to the rejection of Claim 7, Applicants show that the cited reference does not teach the claimed feature of "an oscillator whose output is selectively provided to the camera on the hand only during an audit operation". This claimed feature of an oscillator whose output is selectively provided to the camera on the hand only during an audit operation advantageously provides improved emission suppression by allowing the camera to be selectively enabled during an audit operation. In rejecting Claim 7, the Examiner cites Ellis' abstract as teaching this claimed feature, and noting that the oscillator is being considered as Ellis' anthropomorphic robot arm. Applicants show error, as the abstract (previously reproduced herein) merely describes that the robot arm provides the ability to rotate and angle cameras and grippers attached thereto. The Ellis arm does not have an *output selectively provided to the camera on a hand only during an audit operation*, as claimed. Thus, Claim 7 is shown to have been erroneously rejected under 35 USC 102 as every claimed element is not identically shown in a single reference.

Therefore, the rejection of Claims 1-7 under 35 U.S.C. § 102(b) as being anticipated by Ellis has been overcome.

Claim Rejections – 35 U.S.C. § 103

The Examiner rejected Claims 8-18 under 35 U.S.C. § 103(a) as being unpatentable over Ellis (U.S. Patent No. 5,237,468) in view of Kizuya et al. (U.S. Patent No. 5,365,285). Applicants traverse as follows.

Applicants initially traverse the rejection of Claims 8-18 by showing that the Examiner is using improper hindsight analysis in combining the references. It is error to reconstruct the patentee's claimed invention from the prior art by using the patentee's claims as a "blueprint". When prior art references require selective combination to render obvious a subsequent invention, there must be

some reason for the combination other than the hindsight obtained from the invention itself. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 227 USPQ 543 (Fed. Cir. 1985). Ellis makes no mention whatsoever of any concern with emissions or a desire to reduce emissions. Thus, the only reason to combine the cited Kizuya reference with the teachings of Ellis comes from Applicants' own patent specification, which is improper hindsight analysis, per *Interconnect Planning Corp. v. Feil*, *Id.* Therefore, Claims 8-18 are shown to have been erroneously rejected under 35 U.S.C. § 103(a) using improper hindsight analysis.

Further with respect to Claim 8, Applicants show that such claim has been amended to include features of originally filed dependent Claim 12 (which is being cancelled herewith). As amended, Claim 8 recites "a grasping hand on the manipulator having the camera mounted thereon, the camera having an oscillator having an output enabled by the control system, wherein the control system disables the output of the oscillator and performs data cartridge storage and retrieval operations utilizing the bin location and manipulator position information stored in the memory during normal library operations". This claimed feature of an oscillator having an output enabled by the control system, where the control system disables the output of the oscillator ... during normal library operations advantageously provides improved emission suppression by allowing the camera to be disabled during normal library operations. In rejecting Claim 12 (of which Claim 8 has been amended herewith to include the features of), the Examiner states that Ellis' anthropomorphic robot arm is considered to be the claimed oscillator, and that inherently, turning on or off the camera can be performed by an operator. Applicants show error, in that even assuming *arguendo* that Ellis' robotic arm reads on the claimed oscillator, and assuming *arguendo* that Ellis inherently discloses that an operator can turn a camera on or off, such assertion does not establish a teaching or suggestion of a "camera having an oscillator having an output enabled by the control system, wherein *the control system disables the output of the oscillator* and performs data cartridge storage and retrieval operations utilizing the bin location and manipulator position information stored in the memory during normal library operations" (emphasis

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added by Applicants). Therefore, the Examiner has failed to establish a prima facie showing of obviousness with respect to Claim 12 (whose features are now a part of amended Claim 8). To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. See also, *In re Royka*, 490 F.2d 580 (C.C.P.A. 1974) (emphasis added by Applicants). As all of the claim limitations are not taught or suggested, a prima facie case of obviousness has not been established by the Examiner, and hence the burden has not shifted to Applicants to rebut an obviousness assertion. The amendment to Claim 8 is thus shown to overcome the obviousness rejection thereof.

Applicants further traverse the rejection of dependent Claims 9-11 and 13 for reasons given above regarding Claim 8 (of which Claims 9-11 and 13 depend upon).

Further with respect Claim 11, such claim has been amended to recite the feature of "wherein the output of the oscillator is enabled to operate the camera during an audit operation to provide a clocking signal to electronic circuitry associated with the camera". None of the cited references teach or suggest this claimed feature, which advantageously provides improved emission suppression. Thus, the amendment to Claim 11 is shown to further overcome the rejection of such claim.

Further with respect to Claim 14 (and dependent Claim 15), Applicants have amended such claim to recite the claimed step of "turning the camera off, and then performing subsequent data cartridge storage and retrieval operations utilizing the bin location and manipulator position information stored in the memory to position the manipulator *with the camera off*". None of the cited references teach or suggest such storage and retrieval operations being performed with the camera off, which advantageously provides improved emission suppression. A mere assertion of an operator ability to turn a camera on or off does not establish a teaching or suggestion of performing subsequent data cartridge storage and retrieval operations utilizing the bin location and manipulator position information stored in the memory to position the

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manipulator *with the camera off*. In fact, the cited Ellis reference uses the camera during normal storage and retrieval operations to verify the VOLSER cartridge number (Ellis Col. 11, lines 7-9 and 44-46). Thus, a person of ordinary skill in the art would not have been motivated to modify the cited references in accordance with the claimed invention. The rejection of Claim 14 (and dependent Claim 15) has thus been overcome.

Further with respect to Claim 15 (and dependent Claim 16), Applicants show that none of the cited references teach or suggest the claimed feature of "wherein the manipulator comprises a grasping hand having the camera mounted thereon and the step of turning on the camera includes the step of enabling an output of an oscillator mounted on the hand". In rejecting Claim 15, the Examiner states that Ellis' anthropomorphic robot arm reads on the claimed oscillator, and that an operator can turn the camera on and off. Applicants show that Claim 15 goes beyond this assertion, and specifically states that the step of turning on the camera includes the step of enabling an output of an oscillator. The Examiner's assertion of an ability of an operator to turn a camera on and off does not establish a teaching or suggestion that the step of turning on the camera includes a step of enabling an output of an oscillator. Thus, a prima facie case of obviousness has not been made with respect to Claim 15, as there are claimed elements not taught or suggested, or alleged to be taught or suggested, by any of the cited references. Therefore, Claim 15 (and dependent Claim 16) is shown to have been erroneously rejected under 35 U.S.C. § 103(a), as all claimed elements recited therein are not taught or suggested by the cited references.

Further with respect Claim 16, Applicants show that none of the cited references teach or suggest the claimed feature of "wherein the step of turning off the camera includes disabling the output of the oscillator mounted on the hand". The Examiner's assertion that an operator can turn the camera on or off does not establish a teaching or suggestion of the specific way to which the camera is turned off as recited in Claim 16. Thus, a prima facie showing of obviousness has not been made with respect to Claim 16. To establish prima

facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. *See also, In re Royka*, 490 F.2d 580 (C.C.P.A. 1974) (emphasis added by Applicants).

With respect to Claim 17 (and dependent Claim 18), Applicants have amended such claim and traverse the rejection of Claim 17 (and dependent Claim 18) for similar reasons to those given above regarding Claim 14.

Further with respect to Claim 18, such claim has been amended to recite that "the step of turning off the camera includes the step of disabling an output of an oscillator that, when otherwise enabled, provides a clocking signal to electronic circuitry associated with the camera". None of the cited references teach or suggest this claimed step, which advantageously provides improved emission suppression. Therefore, the amendment to Claim 18 is shown to further overcome the rejection of such claim.


Therefore, the rejection of Claims 8-18 under 35 U.S.C. § 103(a) as being unpatentable over Ellis (U.S. Patent No. 5,237,468) in view of Kizuya et al. (U.S. Patent No. 5,365,285) has been overcome.

CONCLUSION

Applicants have overcome all basis for the Examiner's rejection of Claims 1, 2, 4-11 and 13-18, and thus request that the rejection of such claims be withdrawn and that this case pass to issue. If a telephone conference would expedite allowance or resolve further questions, such a conference is invited at the convenience of the Examiner.

Respectfully submitted,

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